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EAI Integration Monthly Meeting

6 June, 2002

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EAI Integration Monthly Meeting Schedule

Date	Location	Time
December 6, 2001	Room 221 B	10:00-11:00
January 10, 2002*	Room 221 A	10:00-11:00
February 7, 2002	Room 221 A	10:00-11:00
March 7, 2002	Room 221 A	10:00-11:00
April 4, 2002	Room 221 A	10:00-11:00
May 2, 2002	Room 221 A	10:00-11:00
June 6, 2002	Room 221 A	10:00-11:00
July 11, 2002*	Room 221 A	10:00-11:00
August 1, 2002	Room 221 A	10:00-11:00
September 5, 2002	Room 221 A	10:00-11:00

Completed

Upcoming

*These meetings will be held on the second Thursday of the month due to holidays.

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Agenda

- EAI Core Support Services
- Status
- Major Issues
- Security
- Performance Test Results

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Services provided to Application teams by EAI Core Support are comprehensive. They include:

EAI Core Services Support

Business Integration Design

- How can applications integrate with the Enterprise Solution?
- What are Application/ Trading Partner business needs?
- If data transformation is necessary, what are Application/ Trading Partner data specifications?

Architecture Design

- Determine application needs: Online &/or Batch
- Assess application needs
- Propose EAI Solution

System Installation/ Admin

- Install EAI Products
- Configure EAI Products
- Administer EAI products

Interface Development

- Install MQ SW
- Configure MQ SW & Verify
- Build Application Interfaces with or without application team assistance
- SME support during application testing

Performance Testing

- Measure message response time
- Analyze Data Through-put rates

Operations Support and Maintenance

- EAI SME Support
- EAI Architecture Upgrades /Patches

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EAI Key Points of Contact:

System/Initiative	EAI Lead
▪CSID & PEPS Replacement, ▪ Financial Partners Data Mart ▪ FARS Retirement ▪ Enterprise Data Warehouse ▪ NSLDS Re-engineering ▪FAFSA on the Web ▪ FSA Portal ▪ Single Sign On & Security	Eric Suzuki Eric.N.Suzuki@accenture.com (202) 962-0743
▪Business Integration	Bruce Kingsley Bruce.Kingsley@accenture.com (202) 962-0793
▪ FMS	Stacey Deck stacey.deck@us.ibm.com 202-962-0696
▪ LO Web ▪ SAIG	Barnet Malkin barnet@bitsmart.com (202) 962-0645
▪ COD ▪eServicing	Scott Gray sgray@rsgltd.com (202) 962-0795

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EAI Key Points of Contact:

System/Initiative	EAI Lead
▪Consistent Answers ▪ eCampus Based	Julian Ackert julian.ackert@accenture.com 202-962-0734
▪DMCS Replacement	Ryan A. Summers ryan.a.summers@accenture.com 202-962-0796

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Status

Application	Status
FMS	▪ FMS and COD testing through the bus is complete. ▪ Interfaces are in Production.
eCB	▪ Interfaces are in Production.
COD	▪ Supported COD Inter System Test, schools test, and performance testing for COD Release 1.1. ▪ Deployed EAI Architecture to COD Production Environment for COD Release 1.1. ▪ Supported COD interfaces deployment. We scheduled deployment dates with CSC on all COD interface systems. ▪ We will continue to support COD Inter System Test, schools test, and performance testing for COD Release 1.2. ▪ We will deploy EAI Architecture to COD Production Environment for Release 1.2.
FPDM	▪ Interfaces are in Production.
FARS Retirement	▪ Interfaces are in Production.
eZ-Audit	▪ Working with eZ-Audit to determine PEPS interface requirements.
Consistent Answers	▪ Working with Consistent Answers to determine interface requirements for both Siebel and telephony. Next steps are to document the Interface Partner Agreement and begin the Interface Control Documents based on the agreed upon requirements.
DMCS Replacement	▪ Working with DMCS to determine interface requirements and create workplan for development and deployment.

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Major Issues

Issue	Status
EAI is working with ACS to develop a strategy and schedule for upgrading OpenVMS and MQSeries.	The Open VMS, MQSeries, and Data Integrator upgrades are complete on DLSS at ACS.
Changes in VDC change control process require coordination with CSC.	Potentially significant. Working with ITA and CSC to refine change control process and schedule maintenance windows.

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Adapter Development

Environments	Applications										
	SAIG	EAI	PEPS	CPS	NSLDS	COD/TSYS	LOWeb	FMS	eCB	WAS	DLSS
Production	SAIGP1	EAIP1 EAIP2	PEPSP1	CPP1	NPP1	PP0Q	LOWP1	FMSP1	eCBSP1 eCBSP2	WASP1 WASP2	DLSSP1
Inter System Testing	SAIGI1	EAII1 EAII2	PEPSI1	CPT1		VD0Q	LOWI1	FMSI1	eCBSI1 eCBSI2	WASI1 WASI2	
User Acceptance Testing	SAIGU1	EAIU1 EAIU2	PEPSU1	CPA1	NPA1	VDOQ	LOWU1	FMSU1	eCBSU1 eCBSU2	WASU1 WASU2	
Development	SAIGD1	EAID1 EAID2	PEPSD1	CPD1	NPD1			FMSD1	eCBSD1 eCBSD2	WASD1 WASD2	DLSST1

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EAI Security Context

EAI Operates within the context of the FSA Infrastructure supporting FSA Applications

Layer	Example	Developer Access	Application User Access	Physical Access
Application Software supporting a business function	COD, CPS, DLSS, DLCS, DMCS, NSLDS, PEPS	Limited Group of Developers through FSA Security Officer	UserID Controlled by FSA Security Officer	Controlled Access to Developer Facilities
EAI Architecture Common Capabilities used by Applications	IBM MQSeries, MQ System Integrator, Data Integrator	Limited Group of Developers through FSA EAI Security Officer	Queue Manager to Queue Manager through Applications	Via Physical Network Controlled by VDC
Infrastructure Platforms for Architecture and Applications	Servers, O/S, Network, Routers, Firewall	Physical Access Required	Limited Production Access via Applications	Port Restrictions, Firewalls, Router Encryption

EAI Security needs to addresses the two areas of 1) Developer Access, and 2) Access of Queue Mangers to Other Queue Managers

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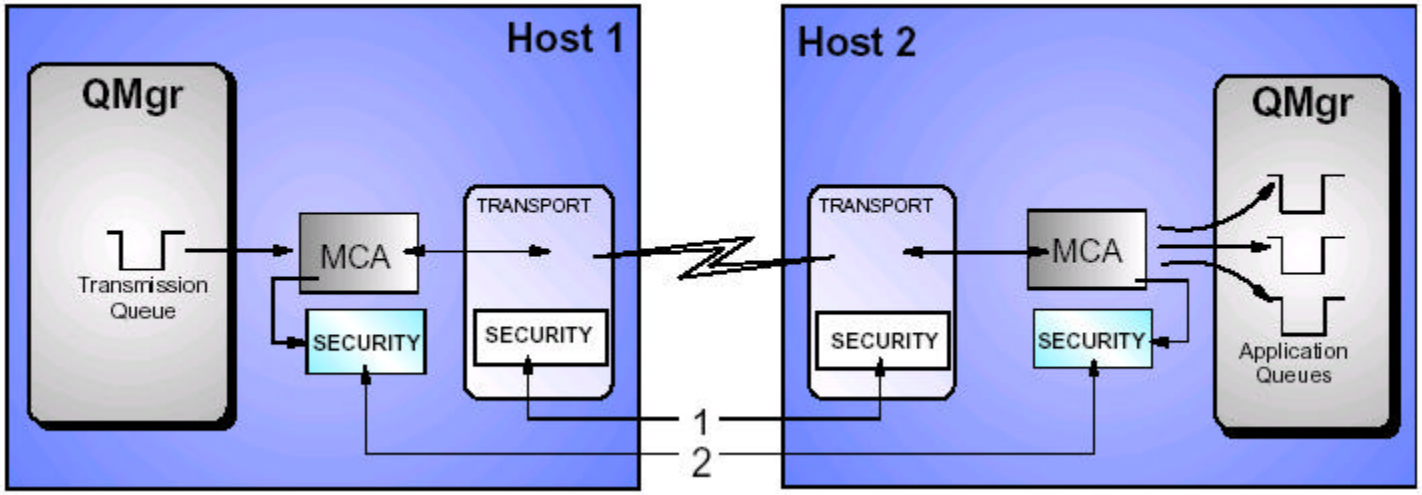
Queue Manager Access Control

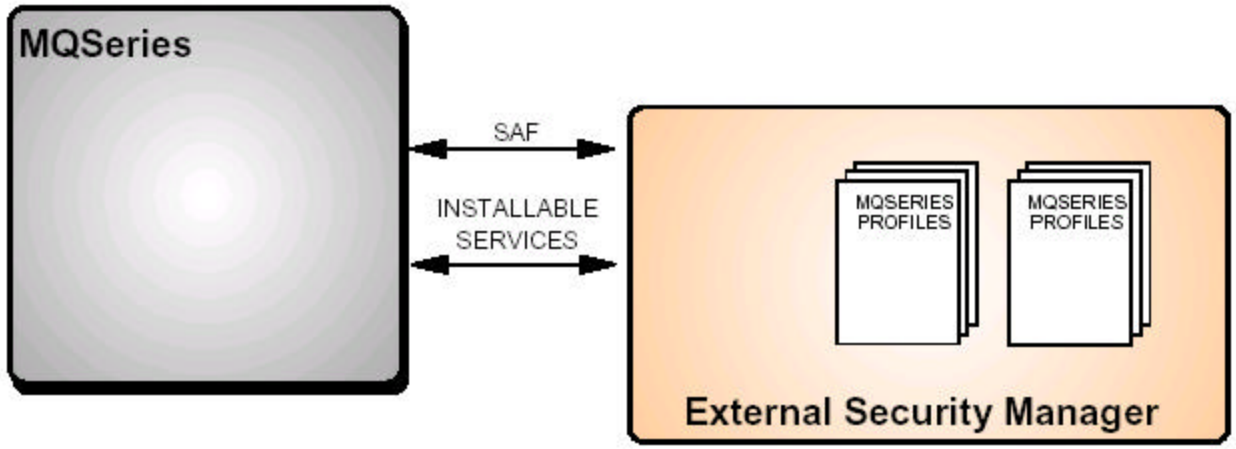
Message Channel Agents Ensure Queue Managers are on Expected Servers



- MQSeries Message Channel Agent (MCA) enables the authentication process to be carried out
- MCA will accept data from authorized servers only (based on ACL-Access Control list

MQSeries Developer Access Control

Developer Access is Controlled through Normal Access Procedures



Complete access control facilities for MQSeries using external security manager:

- FSA Access control is configured at the “group” level on Unix platforms
- FSA Access control is configured at the MQ object level on OS/390

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Implementation Status

- Queue Manager Access Control
  - Implementation in Progress
  - Deployment for COD Release 1.1
- User Access Control
  - Currently using Existing Procedures

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MQ Transaction Performance Testing

- To support FAFSA on the Web interface to CPS
- Include the FAFSA queue manager in an MQSeries cluster with CPS queue manager only
- Each queue manager will have 10 cluster-receiver channels. This will result in messages being passed across all 10 evenly and enable considerable throughput.
- Approximately 60 messages per second passed between two Sun servers without performance tuning
- The CPS queue manager is on OS/390 where MQ performance of 100 messages per second is possible
- Additional throughput can be achieved by increasing the number of cluster-receiver channels

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EAI - FMS Performance Test Results

Interface	Objective	Test	Results
FMS - COD	Measure the rate at which the EAI Bus handles FMS - COD Transactions	370 transactions were monitored from their availability on the Bus until they were committed to the FMS database.	Transactions where available to FMS in 166 seconds. (2 messages per second)
		278 transactions were monitored from the time they are available in the FMS database until they land on a queue destined for COD	Transactions where available to be sent to COD in 84 seconds. (3 messages per second)
eCB - FMS	Measure the rate at which the interface processes eCB UTCL file	A UTCL file with 1945 detailed records was monitored from it's availability on the Bus until it was committed to the FMS database.	File was available to FMS in 22 minutes. (1.5 records per second)
		A UTCL file with 325 detailed records was monitored from it's availability on the Bus until it was committed to the FMS database.	File was available to FMS in 3 minutes (1.8 records per second)

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EAI Performance Test Results

Interface	Objective	Test	Results
PEPS - EAI	Measure time to transfer School File (127 MB) from PEPS to EAI Bus	Transfer file using FTP	Transfer took 2 hrs, 21 min, 28 sec
		Transfer file using EAI	Transfer took 6 min, 10 sec
DLSS - CMDM	Measure the transfer rate of very large monthly demographic file from DLSS to CMDM	Transfer the file using FTP	Transfer took 13 hours
		Transfer the file using EAI	Transfer took 2.5 hours
P-Note Data from LOWEB	Measure the response time for a request for P-Note Data	Several thousand requests for P-Note data were made from the WebSphere server, through the EAI Bus Server, to the LOWEB Server.	Average response time was 1.2 sec
SAIG - COD	Assess SAIG ability to process 6,000 sends within one hour	Simulated 6,000 sends in a very short period of time	All transactions were processed within 30 minutes.

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COD - XML File Conversion Performance

Test files of 20MB, 160MB and 500MB were processed to obtain an understanding of the performance characteristics of the processor as it operated on the BUS (Sun E3500, 4 4OO MHz processors, 4 GB RAM). Testing showed that there was no performance degradation of the processor as the file size grew.

The processor was able to convert a 20 MB file (4300-6500 transactions) in 60-90 seconds, (depending on file type). Results of the tests have been compared to average and max daily volume statistics to obtain an estimate of total processing time.

File Type	Average # of daily transactions	Average day processing time	Maximum # of daily transactions	Maximum day processing time
Output Common Record	200MB	10 min.	600MB	60 min
Legacy Pell Origination Ack.	30,000	7.5 min.	125,000	31.5 min.
Legacy Pell Disbursement. Ack.	45,000	10 min	175,000	38 min.
Legacy DL Origination Ack.	10,000	3 min.	50,000	15 min.
Legacy DL Disbursement Ack.	14,000	4 min.	115,000	33 min.
System Generated Responses	40,000	8 min.	175,000	32 min.

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COD - File Transfer Performance

The tests were conducted from the host system of the trading partner, over MQ/DI, through the BUS. An average and a maximum file size is used, to obtain data on operation under average and heavy loads.

File Type	Frequency	Avg. File Size	Average Time	Max. File Size	Max Time
CPS Abbreviated Applicant File	1 time/day	16MB	10 sec.	50MB	30 sec.
CPS Pell Institution Universe	1 time/day	2.75MB	<5 sec.	2.75MB	<5 sec.
CPS Recipient Record	4 times/year	275MB	3 min.	1.165GB	12 min.
DLSS Daily Batch - Submit	1 time/day	7MB	<5 sec.	50MB	30 sec.
DLSS Daily Batch - Response	1 time/day	100MB	1 min.	200MB	2 min.
DLSS Disbursement Confirmation	1 time/week	24MB	15 sec.	50MB	30 sec.
NSLDS Pell Recipient Info	1 time/day	13.2MB	10 sec.	34MB	15 sec.
NSLDS Pell Recipient Info Response	1 time/day	0.23MB	5 sec.	0.62MB	5 sec.
PEPS Full Refresh Feed	As needed	70MB	40 sec.	100MB	1 min.
PEPS Processed Delta Feed	1 time/day	700KB	<5 sec.	100MB	1 min.
SAIG School Destination Info	1 time/day	10MB	<5 sec.	20MB	10 sec.
SAIG Reports	TBD	111MB	1 min.	2000MB	20 min.

Next Meeting

July 11, 2002